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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,868	10/15/2003	Kenneth Brakeley Welles II	132361	5772

41838	7590	12/31/2007
GENERAL ELECTRIC COMPANY (PCPI)		
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EXAMINER
BEAMER, TEMICA M

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
12/31/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/685,868	<b>Applicant(s)</b> WELLES ET AL.	
	<b>Examiner</b> Temica M. Beamer	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Arguments***

1. Applicant's arguments filed 10/11/2007 have been fully considered but they are not persuasive. Applicant argues that Slonim fails to disclose a system which determines the quality of a communication as amended.

The examiner, however, disagrees. Slonim discloses a system for improved communication and control over power lines. Slonim further discloses monitoring various conditions in the system and turning on and off various loads for control purposes which will ensure communication (col. 5, lines 47-55). A transmitter and receiver are used to communicate over the power lines wherein each have a controller that monitors and controls the transmission and reception of information on the power lines. Thus, the monitoring of the communication can read on determining the quality of the communication.

Based on the above arguments, the rejection stands as set forth below.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 6, 10-15 and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Slonim et al (Slonim), U.S. Patent No. 5,929,749.

Regarding claims 1, 10 and 12, Slonim discloses a method/apparatus of facilitating communication in an electrical power network having a complex impedance, comprising: modifying said complex impedance; and determining whether said modifying affected a quality of said communication (col. 3, line 61-col. 4, line 22, col. 4, lines 46-60 and col. 5, lines 47-56; figures 1-6).

Regarding claims 2 and 13, Slonim discloses wherein said modifying alters a characteristic of a null in said electrical power network (col. 10, lines 24-48).

Regarding claims 3 and 14, Slonim discloses wherein said communication is conducted in a signal frequency band, and wherein said modifying improves said quality in said signal frequency band (col. 4, lines 5-23).

Regarding claims 4 and 15, Slonim discloses wherein said modifying is performed in response to a determination that said quality is below an acceptable threshold (col. 4, lines 46-60).

Regarding claims 6 and 17, Slonim discloses wherein said method/apparatus is employed by a device selected from the group consisting of a transmitter, a receiver, and a transceiver (figure 5).

Regarding claims 11, 22 and 24, Slonim discloses facilitating communication in an electrical power network having a complex impedance, comprising: transmitting information via said electrical power network; modifying said complex impedance; and

retransmitting said information via said electrical power network (col. 3, line 61-col. 4, line 22, col. 4, lines 46-60 and col. 5, lines 47-56; figures 1-6).

Regarding claims 21 and 23, Slonim discloses facilitating communication in an electrical power network having a complex impedance, comprising: a module for determining a quality of communication in said electrical power network; and a module for controlling a circuit to modify said complex impedance if said quality is below an acceptable threshold (col. 3, line 61-col. 4, line 22, col. 4, lines 46-60 and col. 5, lines 47-56; figures 1-6).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 7-9, 16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slonim in view of well-known prior art.

Regarding claims 5 and 16, Slonim discloses the method/apparatus of claims 1 and 12 as described above. Slonim, however, fails to disclose wherein said modifying and said determining are repeated for a plurality of values for said complex impedance, and wherein said method further comprises determining which of said plurality of values yields a best level for said quality.

The examiner contends, however, that such a technique is well-known in the art and the examiner takes official notice as such.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Slonim with such a technique for the purpose achieving an optimal communication.

Regarding claims 7, 9, 18 and 20, Slonim discloses the method/apparatus of claims 1 and 12 as described above. Slonin, however, fails to disclose wherein the method is employed by a transceiver that failed to receive an acknowledgement of a message that said transceiver previously transmitted over said electrical power network and wherein said quality is gauged by whether said communication is acknowledged by a receiver coupled to said electrical power network.

The examiner contends, however, that such features are well-known in the art and the examiner takes official notice as such. Specifically, it is known in the art that the transmission and reception of an acknowledgment message is widely used in determining if messages or certain signals have been received. The lack of transmission or reception of such a message is sometimes used as an indicator that the system is experiencing a malfunction or problem.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Slonim with the teachings of well-known prior for the purpose maintaining proper system function.

Regarding claims 8 and 19, Slonim discloses the method/apparatus of claims 1 and 12 as described above. Slonim, however, fails to disclose wherein said quality is gauged by a bit error rate of said communication.

The examiner contends, however, that such a feature is well-known in the art and the examiner takes official notice as such.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Slonim with the use of bit error rate detection in order to determine if the communication is of a good quality.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temica M. Beamer whose telephone number is (571)

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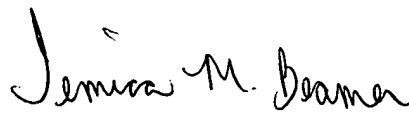
272-7797. The examiner can normally be reached on Monday-Thursday (alternate Fridays) 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Temica M. Beamer  
Primary Examiner  
Art Unit 2617

tmb

  
**TEMICA BEAMER**  
**PRIMARY EXAMINER**